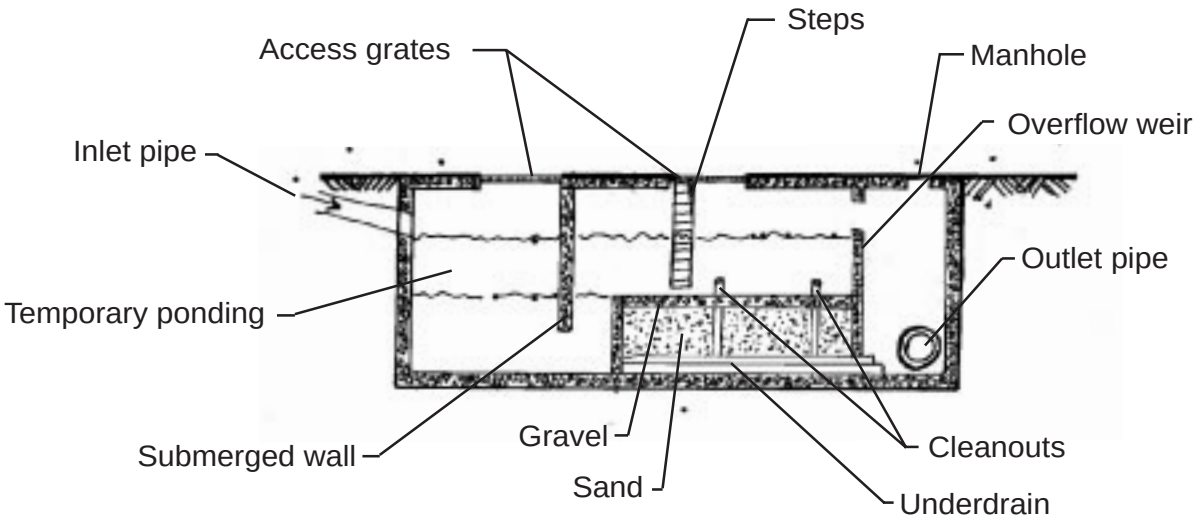
PRIMARY USE: Treatment of pollutants in stormwater where space for drainage is limited.
ADDITIONAL USES:

UNDERGROUND SAND FILTER

What is it? The underground sand filter is a three chamber underground system. The initial chamber takes care of pretreatment, utilizes a wet pool, and temporarily stores runoff. The first chamber is connected to a second sand filter chamber by a submerged wall. The first two chambers temporarily store the water quality volume (WQV) during storms. Perforated drains extend into a third chamber which collects filtered runoff. Flows beyond the filter's capacity are diverted through an overflow weir.

Purpose

The underground filter functions to remove pollutants in constricted urban areas where other BMP structures might be constrained.



Underground Sand Filter
Section View

Limitations

This would not be a filter structure suitable for less densely developed urban areas. This structure may also be of limited use in arid areas where maintenance of the wet pool would be difficult.

Materials

Access grates, manhole cover, sand, concrete, pea gravel, pipes suitable for inlets, outlets and cleanouts.

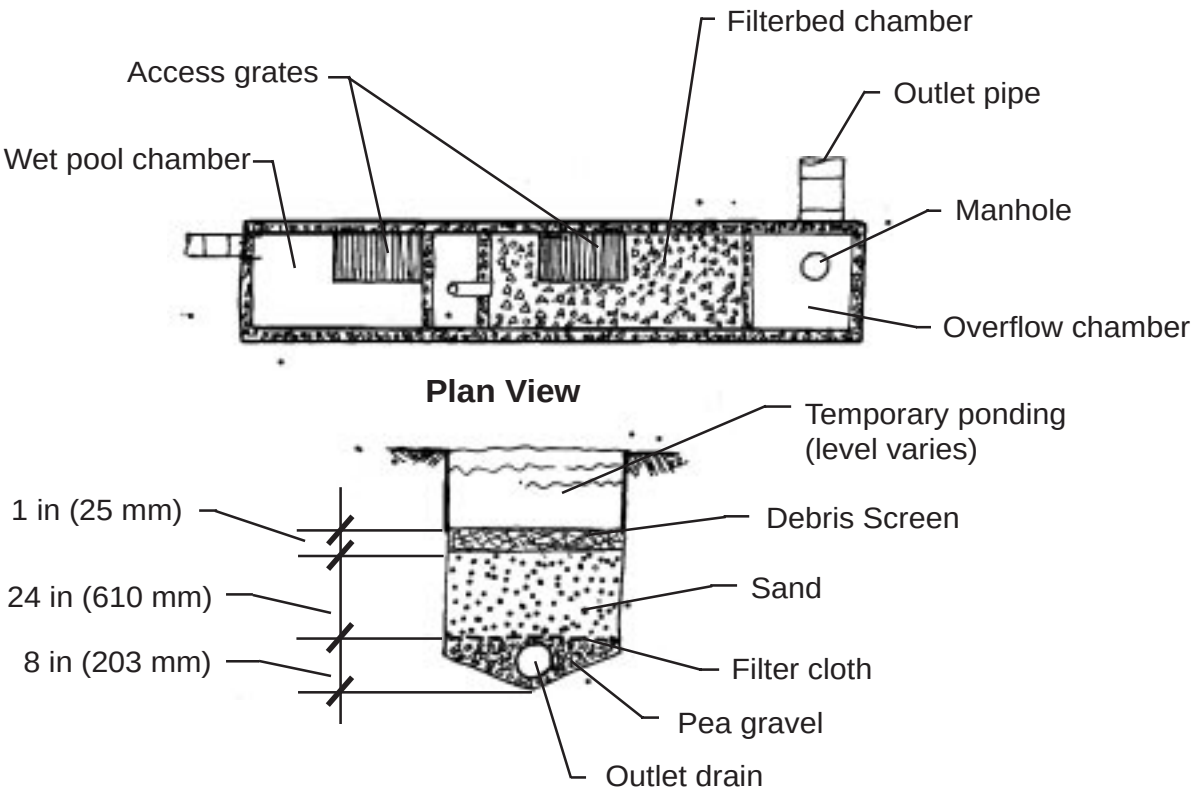
Installation

The main components of this structure could be prefabricated with the filter media installed onsite. Soils in which the structure is located should be well compacted. Pea gravel may be used as a base material to place a prefabricated structure on.

Source: Design for Stormwater Filtering Systems, Center for Watershed Protection.

UNDERGROUND SAND FILTER

Additional Drawings:



Underground Sand Filter
Section View

Source: Design for Stormwater Filtering Systems, Center for Watershed Protection.